

CLAIMS

1. A linear guide device, comprising a guide rail; a guide car reciprocatingly movable on said guide rail in a longitudinal direction; a roll body revolving unit in which an endless row of roll bodies revolve, said roll body revolving unit having a load supporting portion which the roll bodies come in a load supporting engagement with a guide path of said guide rail and also with a running path of said guide car, said running path of said guide car being formed on a running path element which is connected with said guide car and which at least on a roll body entry-side end has a free supporting portion which is not supported on said guide car, said free supporting portion having a length which is at least equal to a diameter of the roll bodies.

2. A linear guide device as defined in claim 1, wherein said free supporting portion has the length which amounts at most to 3.5 times the diameter of the roll bodies.

3. A linear guide device as defined in claim 1, wherein said free supporting portion of the running path element has a length which is at least equal to 1.2 times the diameter of the roll bodies.

4. A linear guide device as defined in claim 1, wherein the free supporting portion of the running path element has a length which amounts to substantially between 1.6 and 1.9 times the diameter of the roll bodies.

5. A linear guide device as defined in claim 1, wherein said free supporting portion of said running element has an elastically deformable underportion with a length which amounts at most to 1.5 times the diameter of the roll bodies.

6. A linear guide device as defined in claim 1, wherein at least a part of said free supporting portion of said running path element is formed as an entry incline.

7. A linear guide device as defined in claim 1, wherein said free supporting portion of said running path element is formed by a recess provided on said guide car.

8. A linear guide device as defined in claim 1, wherein said free supporting portion of said running path element is formed by a recess formed on said running path element.

9. A linear guide device as defined in claim 1; and further comprising a position detecting device having a measuring scale located on at least one of the elements selected from the group consisting of the guide rail and the guide car and a sensor located on another end of said elements selected from the group consisting of the guide rail and the guide car.

10. A linear guide device as defined in claim 9, wherein said position detecting device is formed as an inductive position detecting device.